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## LANDING PROCEDURES FOR FLIGHT SIMULATOR II -- ATARI ST VERSION

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The following is a description of how I land the Cessna and the LearJet in Flight Simulator II. I am not a licensed pilot, these procedures were developed through many hours of trial and error with help from reading several books on flight.

### General tips:

I generally use the keypad to control the aircraft during landing. This is because the control is much more precise and is more repeatable. You have to be comfortable with the "rapid keypress" versus "single keypress" micro-adjustable function of the keypad controls. Refer to the manual for this information. I will refer to RK and SK.

If you want to get your nose up and land rear wheels first you have to know where the true horizon is. In order to make practice easier, put a little dot on your monitor screen right in the middle on the horizon line. Do this while sitting on the ground or pick spot view with spot altitude of zero.

As soon as you start your landing procedure, set your main view to zoom factor 2X. This has several good effects. 1) It allows you to line up on the runway MUCH farther out. 2) It allows you to judge your glide more accurately; do this by watching the end of the runway -- is it moving away from the horizon or moving closer to the horizon? It should be doing neither. 3) When you get to the runway you will see it in a much more normal-looking view. Keep in mind that the 1X view is really quite wide-angle. 4) You will be able to judge your nose-up or nose-down attitude much easier as the effect is magnified.

I generally do not use flaps for landing. I know that this is not a good idea for real pilots although some real pilots do this also. The flaps make it much harder to get that nose up and also make the control of the craft mushy and slower to respond. These are very real effects. You must slow the plane down by using back elevator. (if anyone has any good procedures for landing with flaps, I would like to see them.)

A very common mistake in FS2 is that pilots don't line up on the runway anywhere near soon enough. In your view, the runway center line should be a perfectly verticle line. If the top of the line is to the right of the bottom, you are off to the right and should fly a little to the left of the runway for a while until the line is verticle again. Get comfortable with non-autocoordinated mode so that you can use the rudder to make these small adjustments. Keep your left hand on the < & > keys and use the '5' on the keypad to center the rudder.

This is a run-through of an actual LearJet landing:

- \* I am going to land at Dulles International, Wash. DC.
- \* My NAV1 is tuned to 110.1 (Dulles Inst. Landing System)
- \* Altitude is 2000 ft.
- \* I am cruising slow at 130 knots -- the elevator indicator is on the 3rd small mark from the top. (Just being on that mark is not accurate enough. Put it on that mark, then use SK's to move it down until it moves just below the mark and then 1 SK up to put it back on it. This is the exact position that I recommend.)
- \* I am south of the field at coordinates 16056 x 20067.
- \* My heading is 010.
- \* My DME is reading 16 miles out.
- \* I am cruising level with RPM of 64% -- the throttle is set next to that line right above where it says CARB HEAT.

I struggle to keep the ILS left-right indicator centered. When I see the airport appear in front of me I then ignore the left-right indicator and visually line up on the right-hand runway.

I continue to fly level until I see the glide-path indicator start to move down. When it has almost reached center I reduce throttle to start descent. The throttle is now just below being lined up with the 'H' in HEAT. I do not touch the elevator but use only the throttle to control the glide. If the glide-path indicator moves down a little I pull off of the throttle 2 RK's. If it moves up I push the throttle up a little.

When the blue middle-landing-marker goes off I am perfectly lined up on the runway. (if I was not I would abort the attempt) When the middle marker has STOPPED sounding it is time to begin the flare out.

I pull back on the elevator 2 RK's and watch the nose come up. (at this point it is important to check the throttle--it should be about level with the 'H' in HEAT. If it is much higher or lower due to my glide adjustments I will fix it now while I am watching my nose come up.) When I see the nose stop rising I pull back 2 more RK's. I sit back and watch the nose rise some more. At this point it will usually stop rising somewhere close to the horizon. After it has stopped, I pull back 2 more RK's-- this will bring the nose up above the horizon for sure. The plane may float a bit at this point. As the plane starts to slowly settle down to the runway I continually apply a little back pressure to the yoke with SK's to keep the nose up while it descends. If the stall warning comes on at this point I know that I can still give it about 3 more SK's until it actually stalls.

The tires squeal and the nose visibly comes down. I reduce throttle to zero and apply the brakes.

I am sure that this will NOT work for you the very first time you try it. Get into position on the glideslope somewhere close to the yellow outer marker and save that position so that you can practice as many times as it takes.

### Landing the Cessna:

This is a much simpler procedure. I line up on the runway visually.

I adjust my glide in much the same way as noted above. My elevator and throttle positions are much the same. (I am flying much slower, obviously)

As I near the runway I begin pulling back on the stick, RK's at first and then SK's, until the stall warning appears. I push the throttle forward until the indicator is exactly in between the 'C' and 'H'. The actual position needed for the throttle depends on the altitude. More throttle is needed at higher altitudes.

I watch the horizon line--if it is too low I give it a little more throttle. I also watch the verticle-speed indicator. I want to make sure that I am actually descending a little.

The plane should simply fly into the runway with a slight nose-up attitude. It usually works. Sometimes it just makes a 3-pointer. This is called a power-on landing.

It is possible to make a perfect power-off flare-out type landing. I have done it several times but it is VERY hard to judge when to start the flare-out. You have to be very close to the runway and it is quite difficult to judge your height off the runway that closely in FS2. It is my experience that it is just hit and miss.

I have tried hard to make this as clear as possible. If I have made any mistakes or if I have failed to make myself understood -- please give me some feedback and I will respond.